

4.2.A. 0511000201.

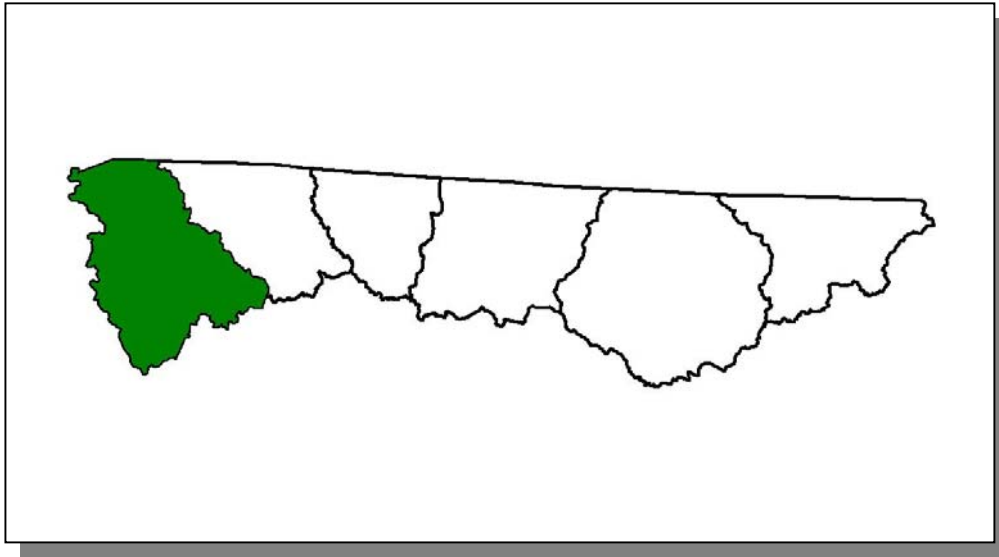


Figure 4-2. Location of Subwatershed 051100020101. All Barren River HUC-10 subwatershed boundaries are shown for reference.

4.2.A.i. 051100020101 (Upper West Fork).

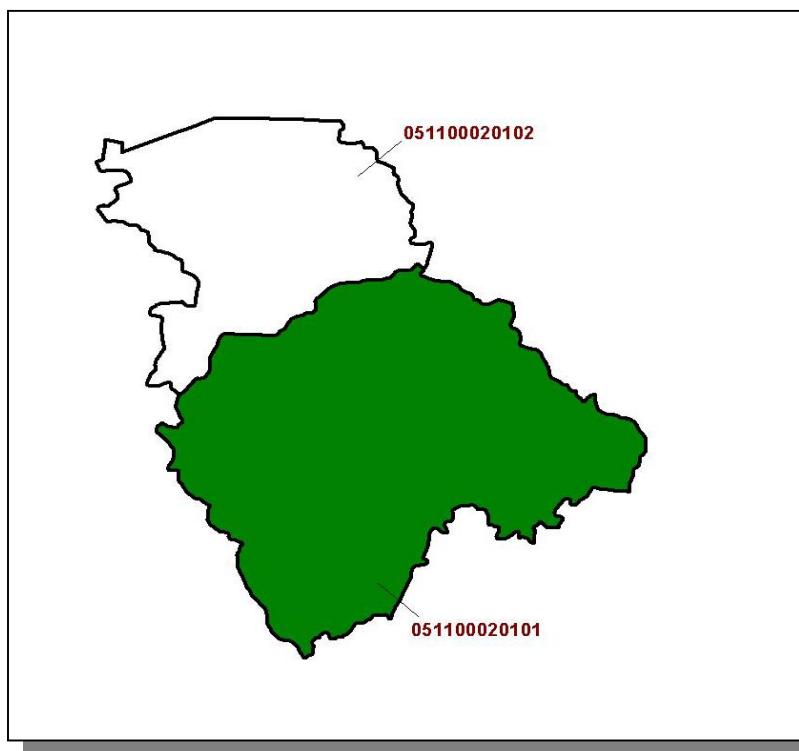


Figure 4-3. Location of Subwatershed 051100020101. All Barren River HUC-12 subwatershed boundaries are shown for reference.

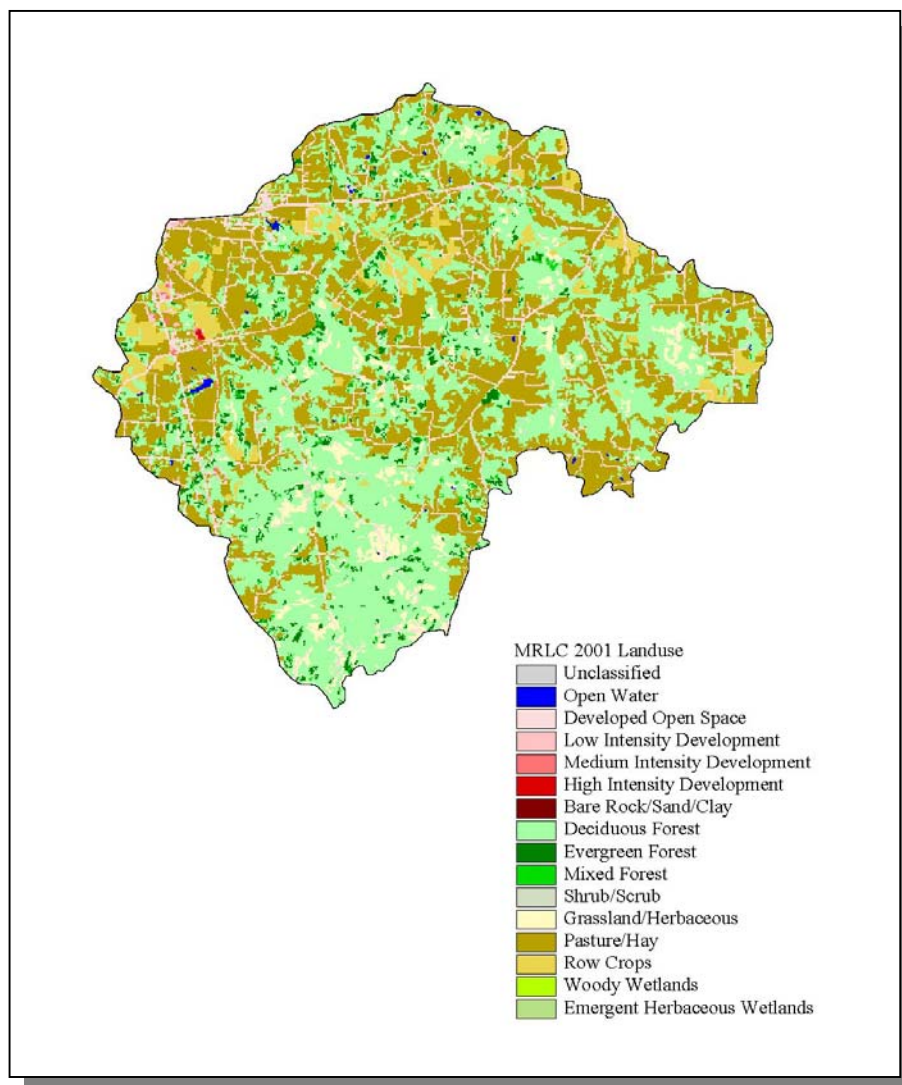


Figure 4-4. Illustration of Land Use Distribution in Subwatershed 051100020101. More information is provided in Appendix IV.

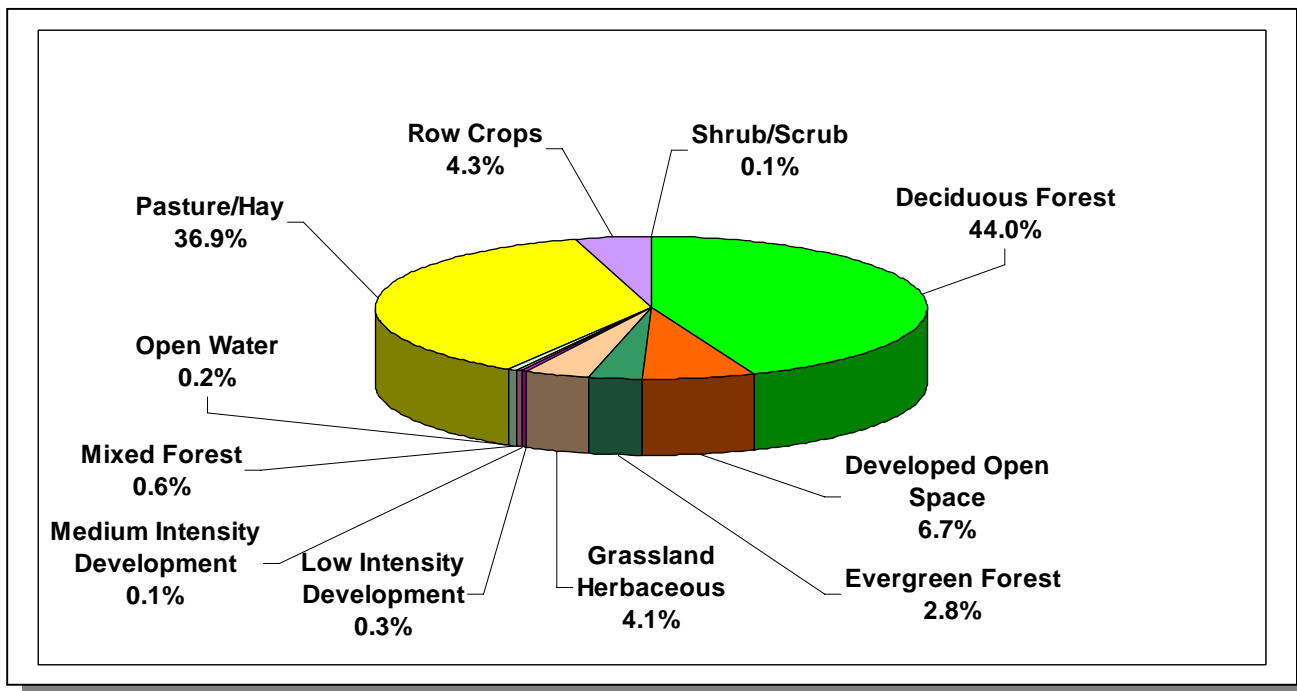


Figure 4-5. Land Use Distribution in Subwatershed 051100020101. More information is provided in Appendix IV.

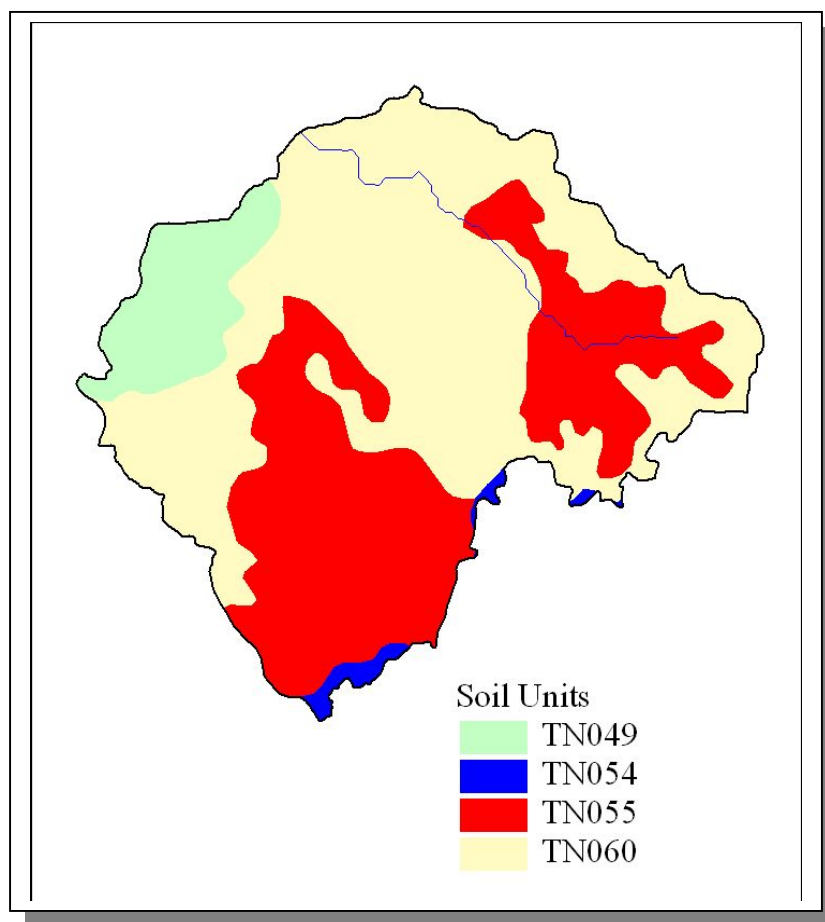


Figure 4-6. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051100020101.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN049	0.00	B	1.30	5.94	Silty Loam	0.34
TN054	0.00	C	3.04	4.84	Loam	0.32
TN055	3.00	C	2.45	5.24	Loam	0.34
TN060	5.00	B	1.30	5.32	Silty Loam	0.39

Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051100020101. The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Sumner	103,281	121,936	130,449	9.55	9,865	11,646	12,460	26.3

Table 4-3. Population Estimates in Subwatershed 051100020101.

				NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other	
Portland	Sumner	5,165	2,101	1,382	705	14	

Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051100020101.

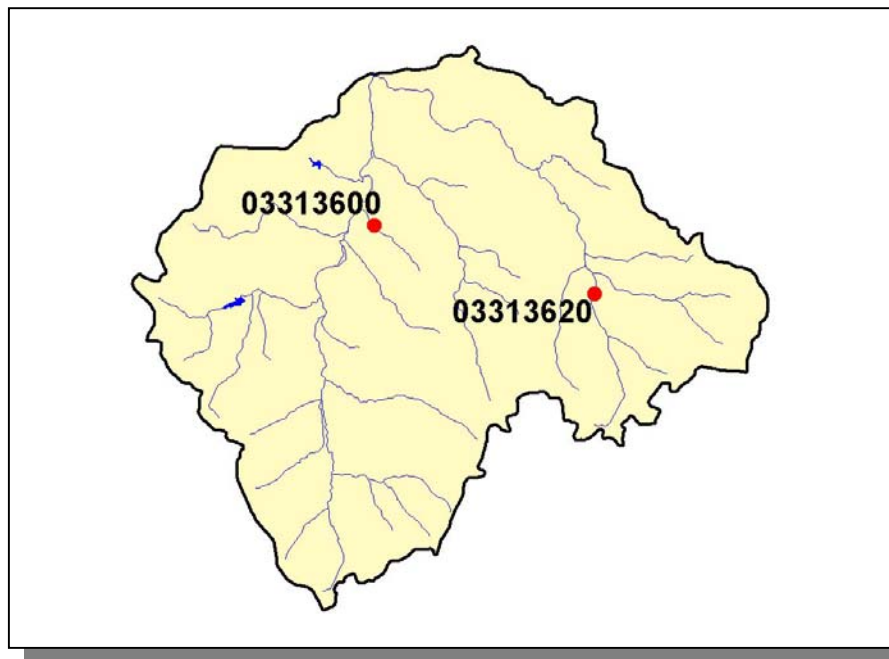


Figure 4-7. Location of Historical Streamflow Data Collection Sites in Subwatershed 051100020101. More information is provided in Appendix IV.

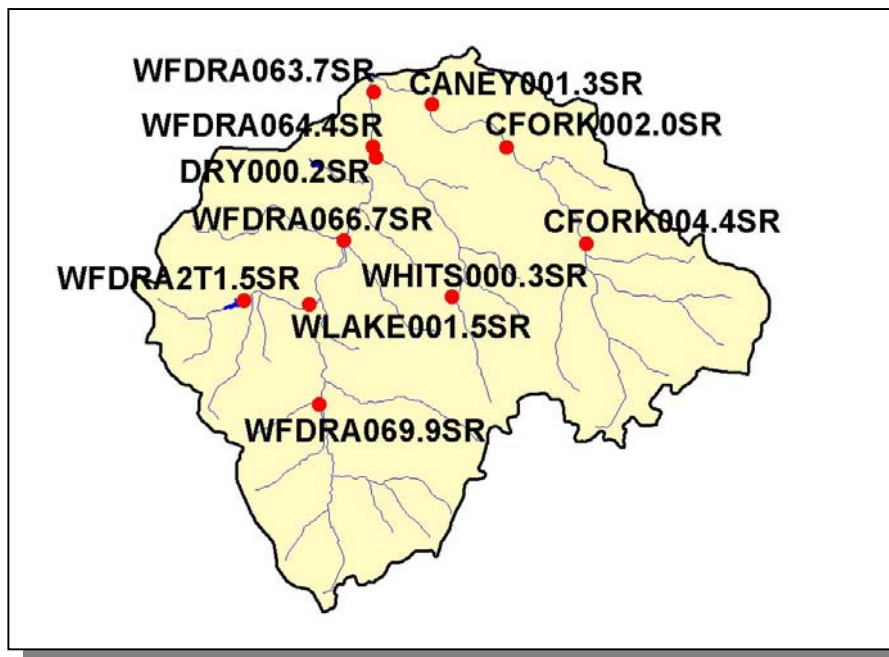


Figure 4-8. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051100020101. More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

4.2.A.i.a. Point Source Contributions.

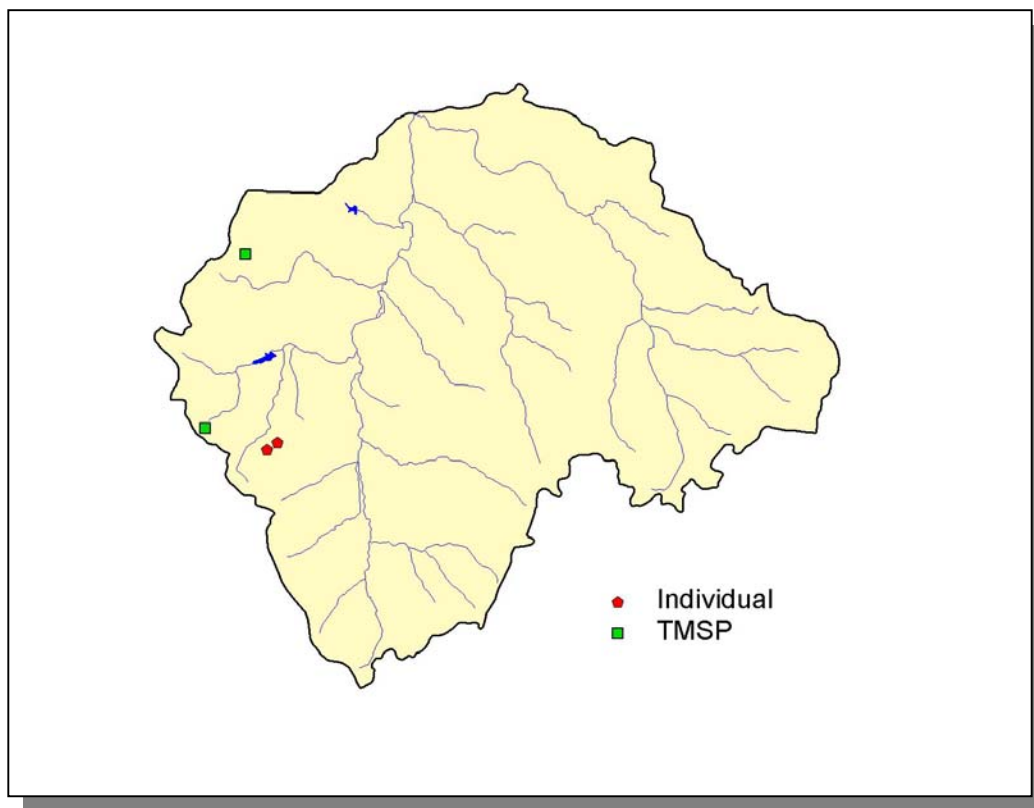


Figure 4-9. Location of Active NPDES Sites in Subwatershed 051100020101. More information, including the names of facilities, is provided in Appendix IV.

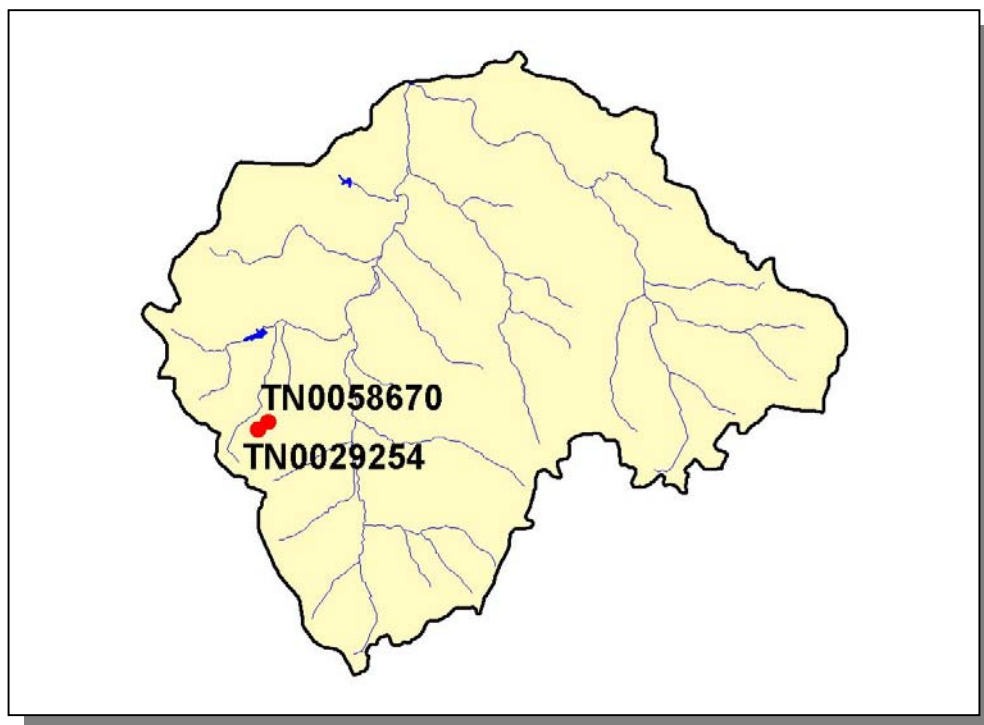


Figure 4-10. Location of Active NPDES Sites in Subwatershed 051100020101. More information, including the names of facilities, is provided in Appendix IV.

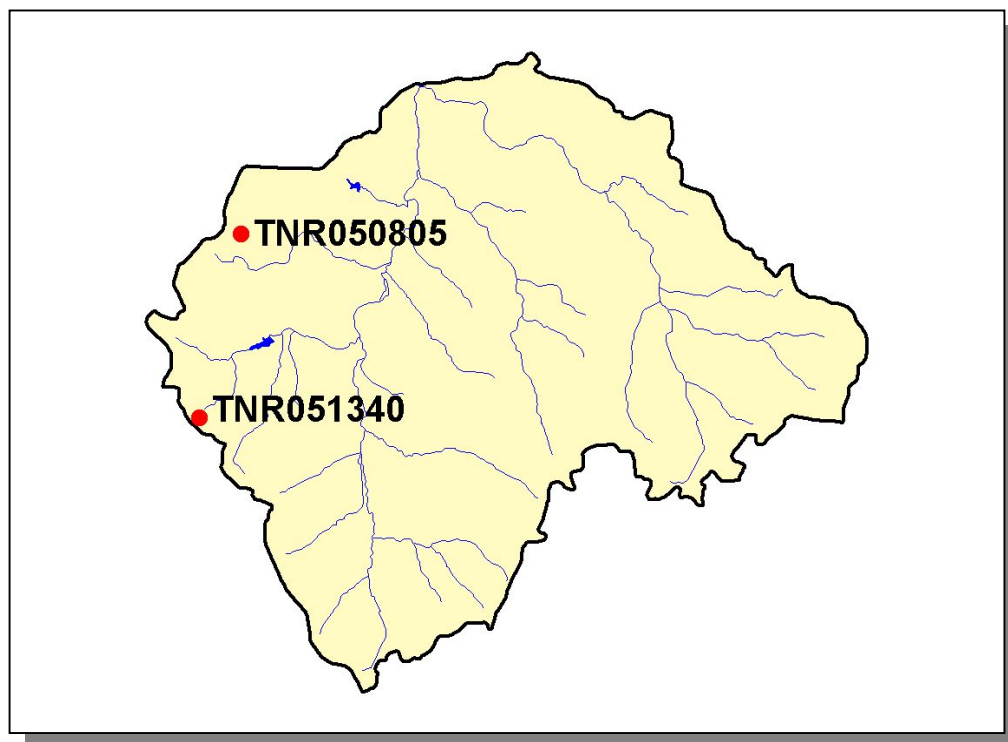


Figure 4-11. Location of TMSF Sites in Subwatershed 051100020101. More information, including the names of facilities, is provided in Appendix IV.

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4.2.A.i.b. Nonpoint Source Contributions.

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
3,641	7,368	247	8	408	31

Table 4-5. Summary of Livestock Count Estimates in Subwatershed 051100020101. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Sumner	22,296	45,116	1,515	50	2,500	189

Table 4-6. Summary of Livestock Count Estimates in Sumner County. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Sumner	88.2	88.2	2	6.3

Table 4-7. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 051100020101.

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.23
Legumes (Hayland)	0.12
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.32
Soybeans (Row Crops)	11.27
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Non-Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.34

Table 4-8. Annual Estimated Total Soil Loss in Subwatershed 051100020101.

4.2.A.ii. 051100020102 (Lower West Fork).

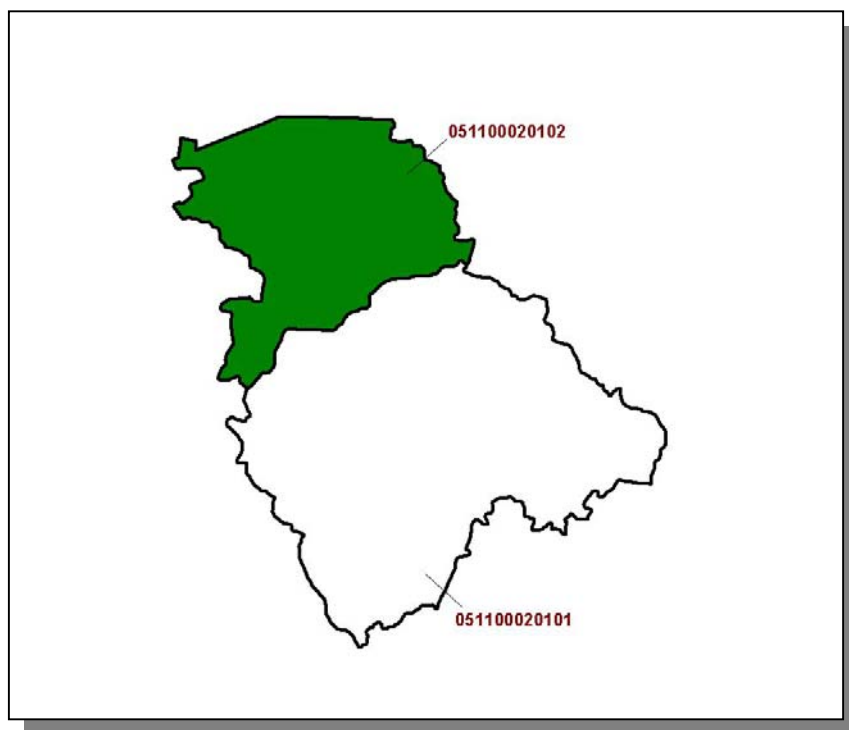


Figure 4-12. Location of Subwatershed 051100020102. All Barren River HUC-12 subwatershed boundaries are shown for reference.

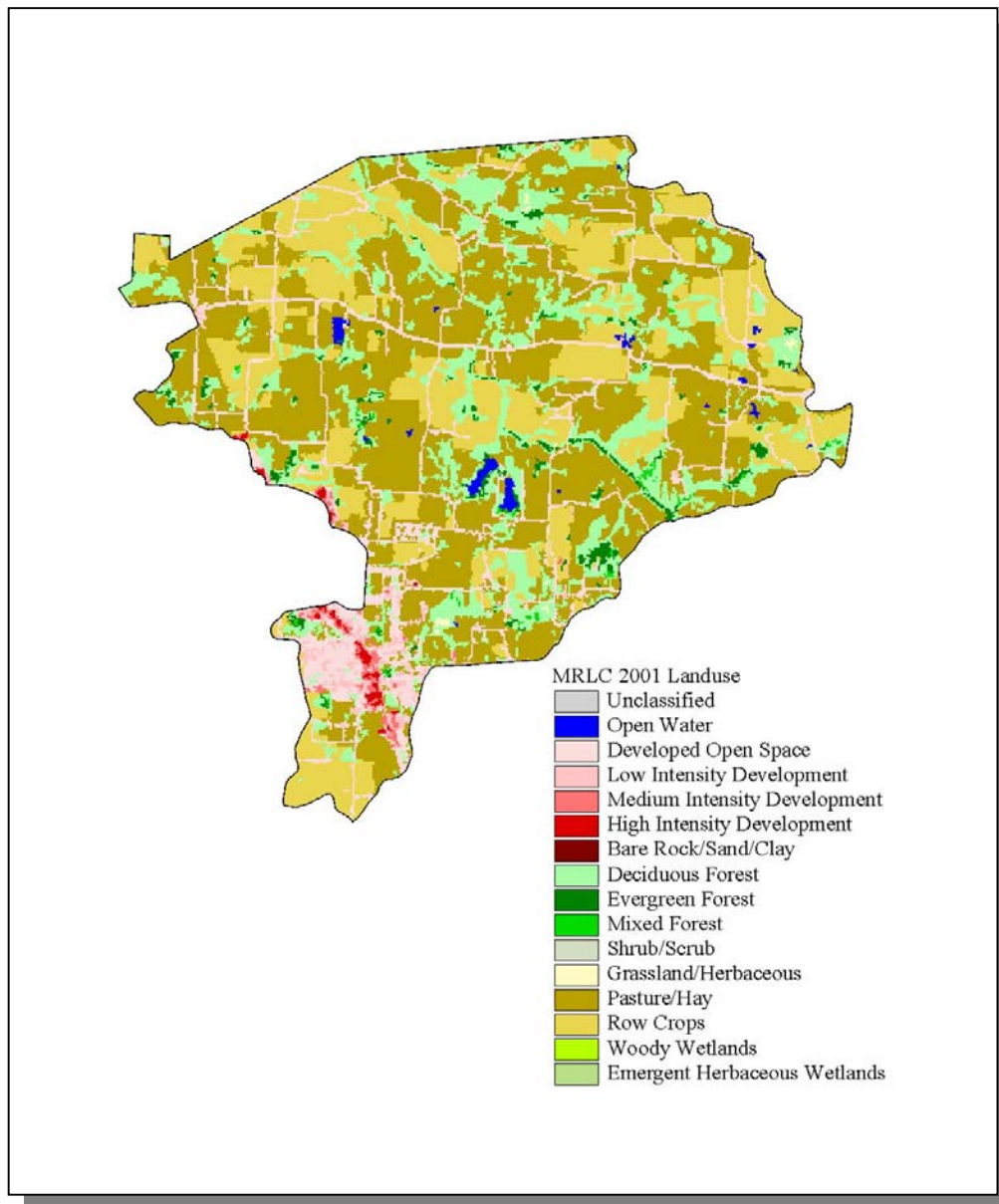


Figure 4-13. Illustration of Land Use Distribution in Subwatershed 051100020102. More information is provided in Appendix IV.

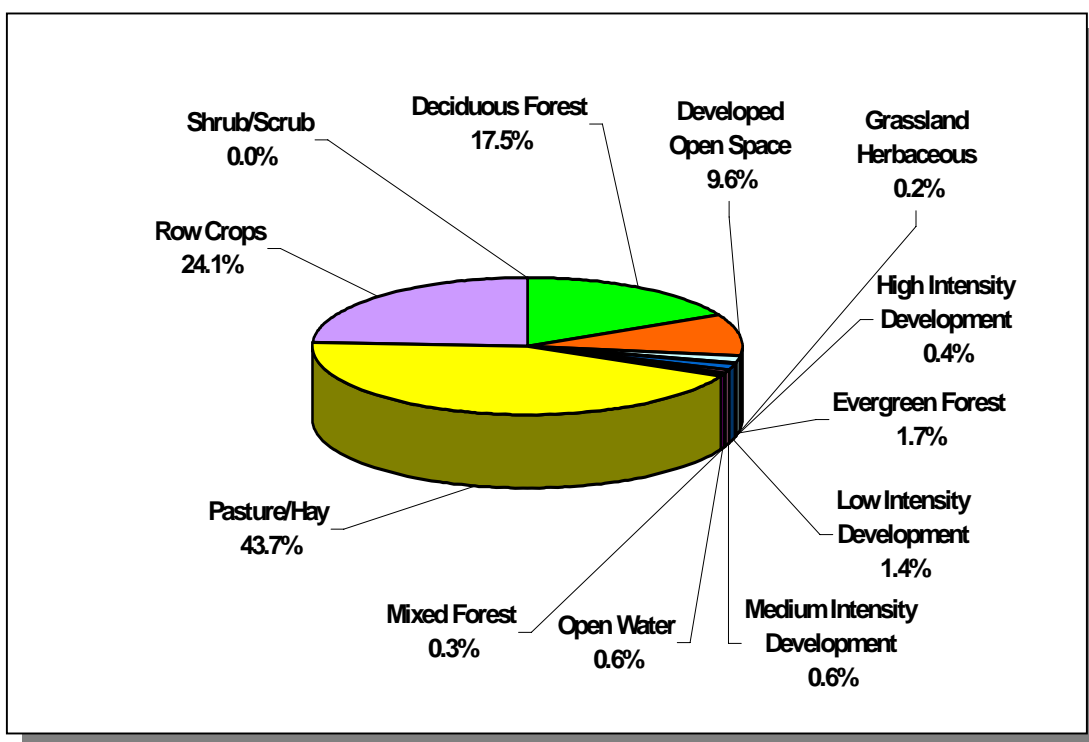


Figure 4-14. Land Use Distribution in Subwatershed 051100020102. More information is provided in Appendix IV.

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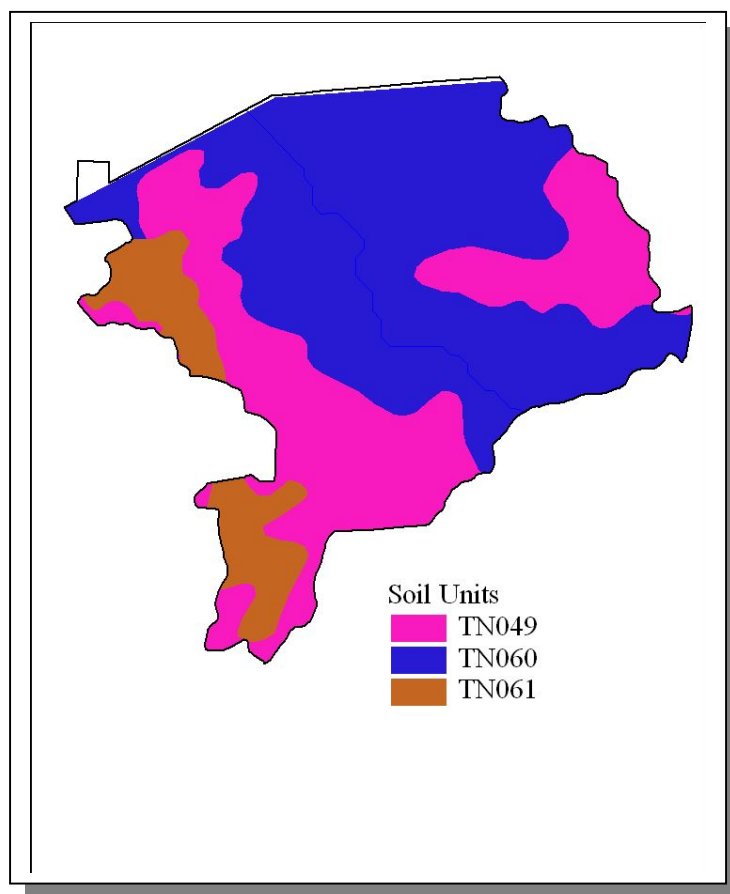


Figure 4-15. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051100020102.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN049	0.00	B	1.30	5.94	Silty Loam	0.34
TN060	0.00	B	1.30	5.32	Silty Loam	0.39
TN061	50.00	C	1.30	5.09	Silty Loam	0.42

Table 4-9. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051100020102. The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Robertson	41,494	51,533	54,433	0.25	103	128	135	31.1
Sumner	103,281	121,936	130,449	4.94	5,107	6,029	6,450	26.3
Total	144,775	173,469	184,882		5,210	6,157	6,585	26.4

Table 4-10. Population Estimates in Subwatershed 051100020102.

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Mitchellville	Sumner	198	96	2	94	0
Portland	Sumner	5,165	2,101	1,382	705	14
Totals		5,363	2,197	1,384	799	14

Table 4-11. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051100020102.

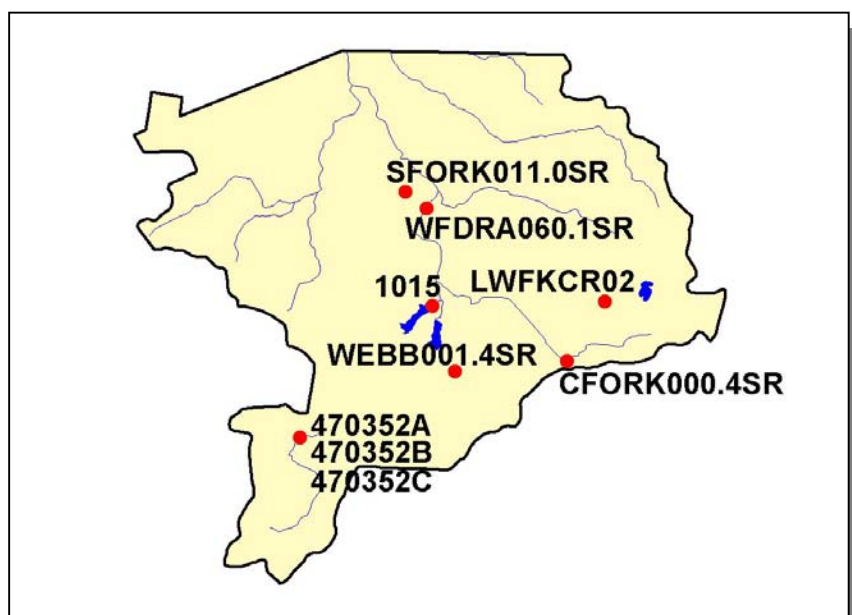


Figure 4-16. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051100020102. More information, including site names and locations, and station numbers for sites located in the watershed outside of Tennessee, is provided in Appendix IV.

4.2.A.ii.a. Point Source Contributions.

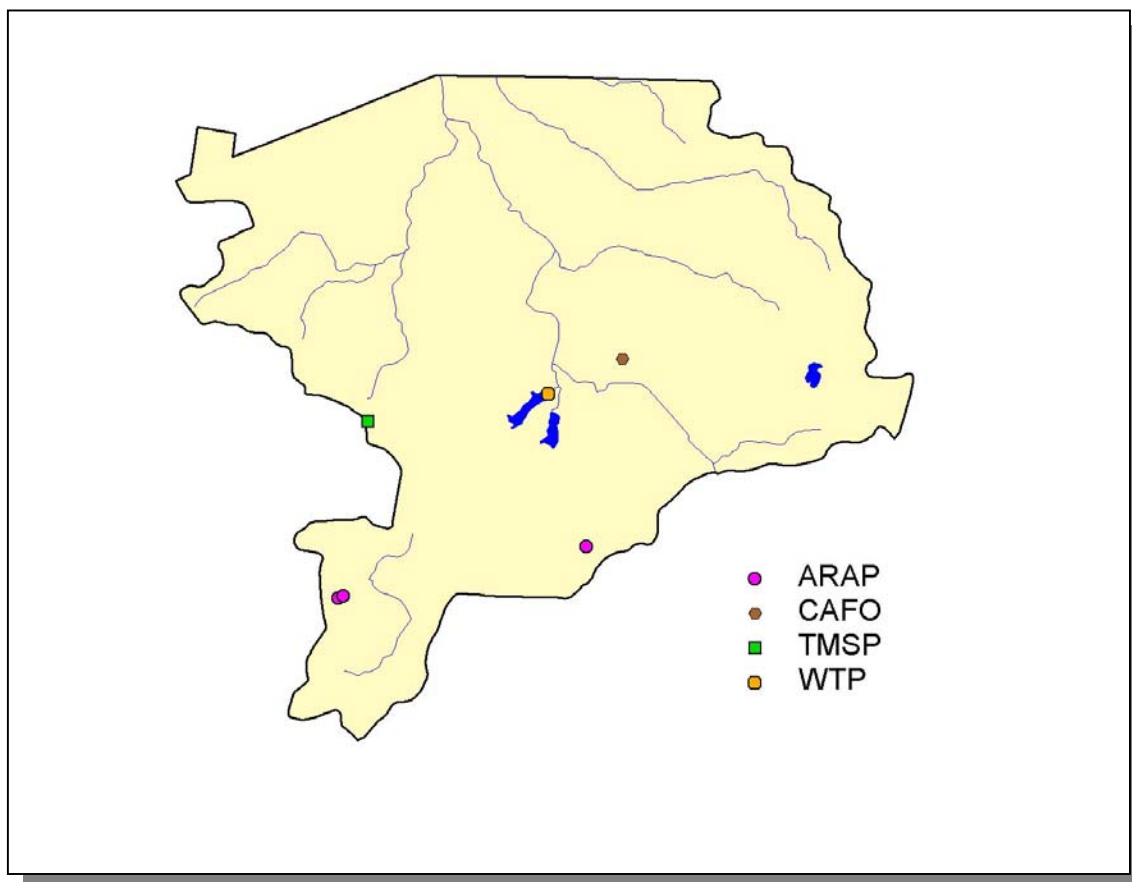


Figure 4-17. Location of Permits Issued in Subwatershed 051100020102. More information, including the names of facilities, is provided in Appendix IV.

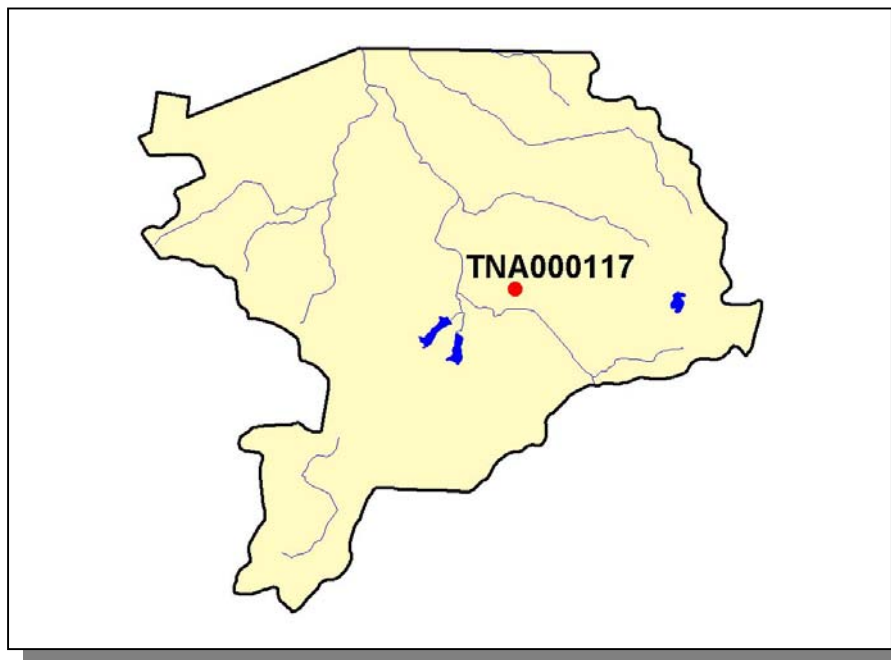


Figure 4-18. Location of Concentrated Animal Feeding Operations (CAFO) in Subwatershed 051100020102. More information, including the names of facilities, is provided in Appendix IV

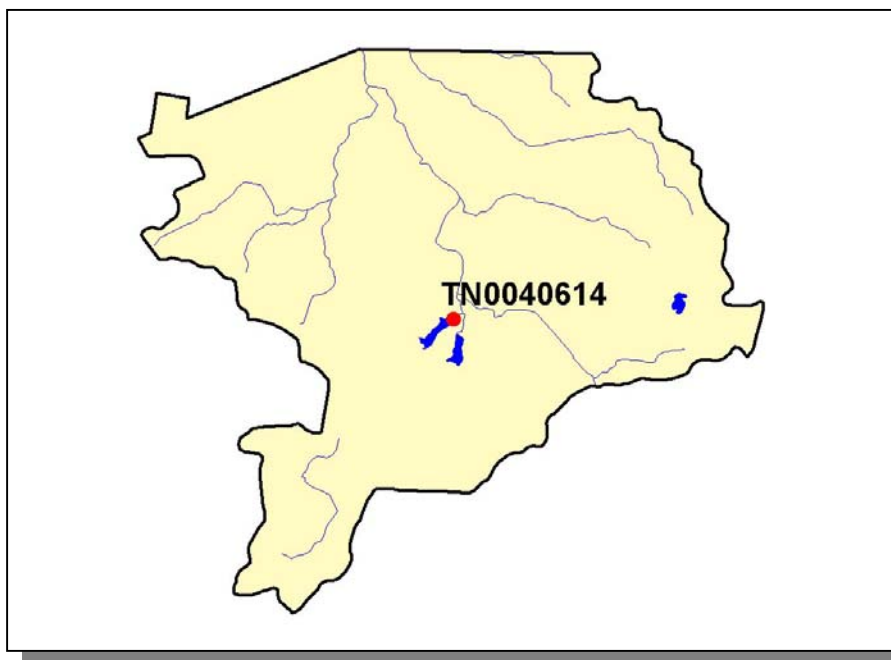


Figure 4-19. Location of Water Treatment Plants in Subwatershed 051100020102. More information, including the names of facilities, is provided in Appendix IV.

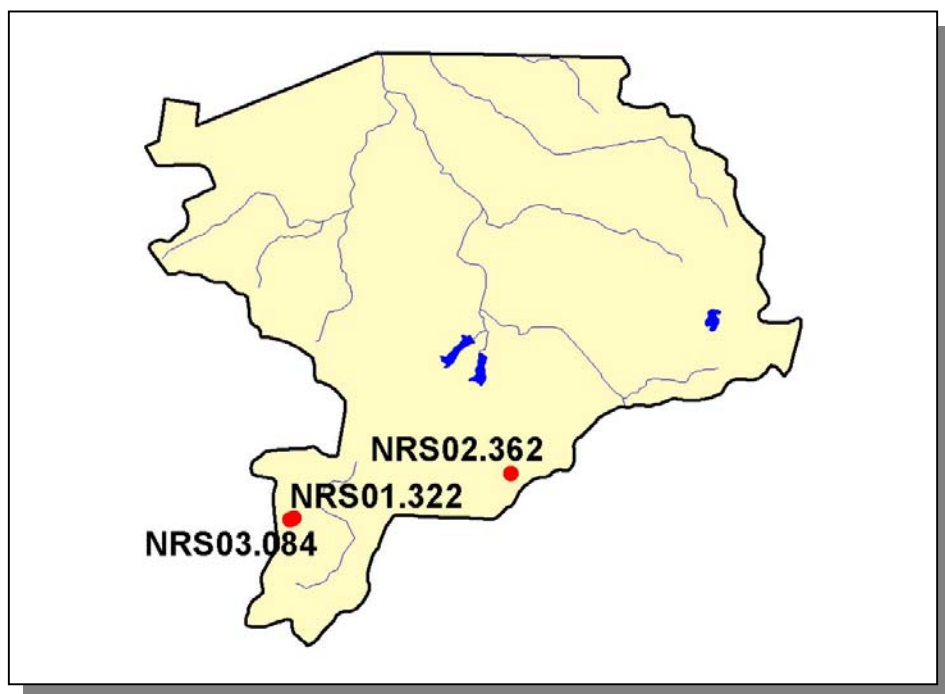


Figure 4-20. Location of Aquatic Resource Alteration Permit (ARAP) Sites (Individual Permits) in Subwatershed 051100020102. More information is provided in Appendix IV.

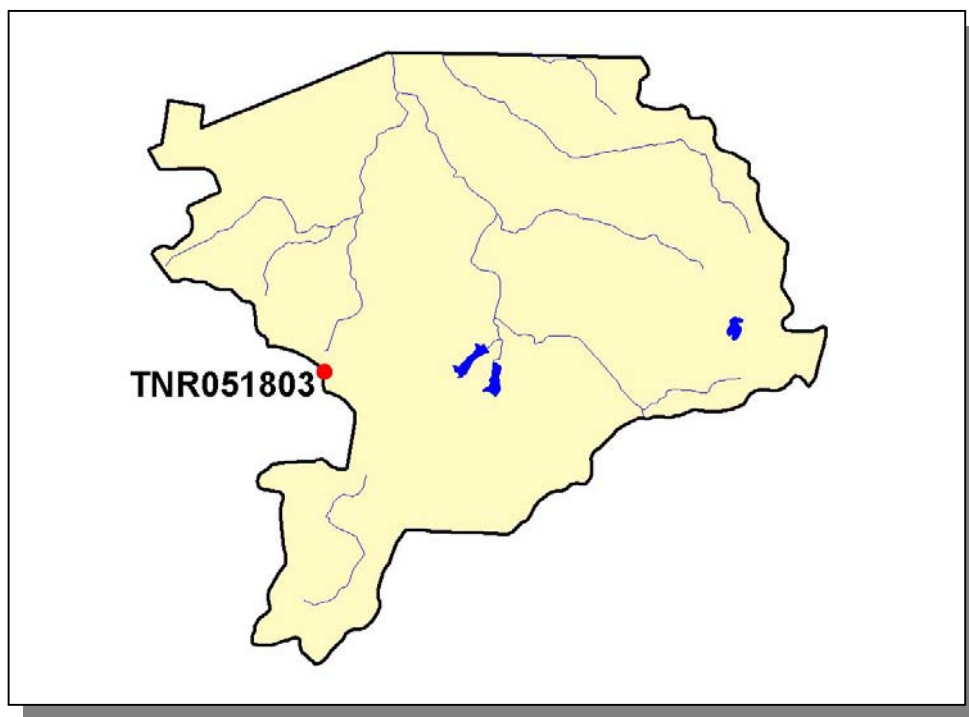


Figure 4-21. Location of TMSP Sites in Subwatershed 051100020102. More information, including the names of facilities, is provided in Appendix IV.

4.2.A.ii.a. Dischargers to Water Bodies Listed on the 2004 303(d) List

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051100020102:

- TN0040614 (Portland WTP) discharges to Donaho Branch

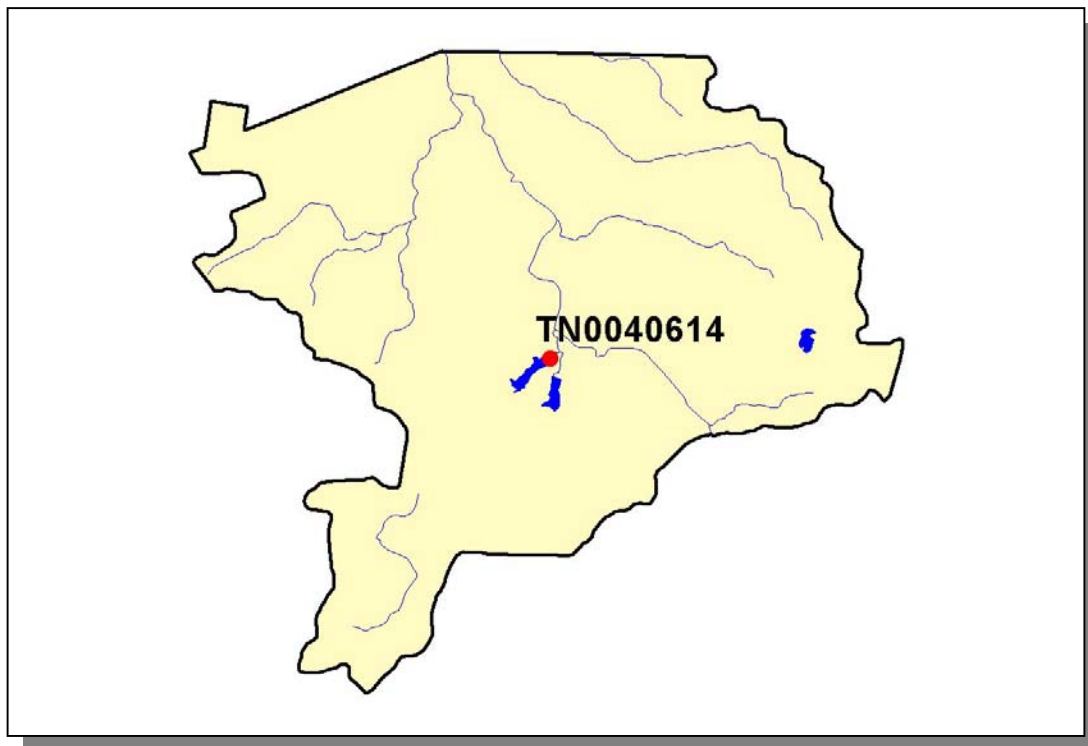


Figure 4-22. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051100020102. More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0040614			0		

Table 4-12. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051100020102. Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	AI
TN0040614	X

Table 4-13. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051100020102.

PERMIT #	TRC	TSS	SETTLEABLE SOLIDS	pH
TN0040614	X	X	X	X

Table 4-14. Inorganic Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051100020102. TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

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4.2.A.ii.b. Nonpoint Source Contributions.

LIVESTOCK					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,998	4,043	136	<5	224	17

Table 4-15. Summary of Livestock Count Estimates in Subwatershed 051100020102.
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Robertson	22,502	47,887	3,478	31	6,982	279
Sumner	22,296	45,116	1,515	50	2,500	189

Table 4-16. Summary of Livestock Count Estimates in Robertson and Sumner Counties.
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Robertson	53.0	53.0	2.2	9.7
Sumner	88.2	88.2	2.0	6.3

Table 4-17. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 051100020102.

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.46
Grass (Hayland)	0.31
Legumes (Hayland)	0.12
Legumes, Grass (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.54
Corn (Row Crops)	12.32
Soybeans (Row Crops)	11.27
Tobacco (Row Crops)	11.87
Wheat (Close-Grown Cropland)	1.68
Other Cropland not Planted	19.23
Conservation Reserve Program Lands	0.26
Other Land in Farms	0.27
Farmsteads and Ranch Headquarters	0.34

Table 4-18. Annual Estimated Total Soil Loss in Subwatershed 051100020102.